

#2

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/924,035

DATE: 08/21/2001
TIME: 09:25:28

Input Set : N:\EBONY'S\ES.txt
Output Set: N:\CRF3\08162001\I924035.raw

P5

4 <110> APPLICANT: Grlach, Jrn
 6 <120> TITLE OF INVENTION: Expressed Sequences of Arabidopsis
 7 thaliana
 9 <130> FILE REFERENCE: 2011US
 W--> 11 <140> CURRENT APPLICATION NUMBER: US/09/924,035
 C--> 11 <141> CURRENT FILING DATE: 2001-08-07
 13 <150> PRIOR APPLICATION NUMBER: US 60/148,784
 14 <151> PRIOR FILING DATE: 1999-08-13
 16 <160> NUMBER OF SEQ ID NOS: 900
 18 <170> SOFTWARE: FastSEQ for Windows Version 3.0
 20 <210> SEQ ID NO: 1
 21 <211> LENGTH: 427
 22 <212> TYPE: DNA
 23 <213> ORGANISM: Arabidopsis thaliana
 25 <220> FEATURE:
 26 <221> NAME/KEY: misc_feature
 27 <222> LOCATION: (1)...(427)
 28 <223> OTHER INFORMATION: n = A,T,C or G
 30 <400> SEQUENCE: 1
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 32 tggtcaccaa gaagcggtga caccaataac caaccgcata gttggcctct tgaagatgg 120
 33 cctcattctg atttcacggg acctacctcg ggggcacag cgtgttagc tcttattaaa 180
 34 gataagaacg tcattgttgc aaatgcgggt gactcacgtt gtgtgatatac aagaaagagt 240
 35 caggcttaca atcttictaa agatcacaag cctgatctt aagttgaaaa agaaaggata 300
 W--> 36 ttgnangctg gtggctttat tcacgctggg agaatcaatg gaagcttgaa tctgacaaga 360
 37 gccatttgtt atatggagtt caagcagaat aagttttac catctgaaaa gcaaattggtt 420
 38 actgctg
 40 <210> SEQ ID NO: 2
 41 <211> LENGTH: 206
 42 <212> TYPE: DNA
 43 <213> ORGANISM: Arabidopsis thaliana
 45 <400> SEQUENCE: 2
 46 agataaatgaa catatttctg tccctgaagt ttttgccttc ttcaaggtaa agctccccta 60
 47 ttccggtttg gaaacgtctg aggagttcaa tagcgatatt tctgaactcg tttctcgtc 120
 48 ctttcatgtt cacaatcacc ttaaccttgc caccatcttgc caagaacttt tggcagccc 180
 49 tttagacgaaac ggaataatca tgctga 206
 51 <210> SEQ ID NO: 3
 52 <211> LENGTH: 369
 53 <212> TYPE: DNA
 54 <213> ORGANISM: Arabidopsis thaliana
 56 <220> FEATURE:
 57 <221> NAME/KEY: misc_feature
 58 <222> LOCATION: (1)...(369)
 59 <223> OTHER INFORMATION: n = A,T,C or G
 61 <400> SEQUENCE: 3
 62 cggtatcgtt aagcttgcata tcgaattcgc ggcgcctcg gtgaccatat tcaaaaacttt 60
 63 cccacgttaa ttctcttctt tttgtttgtt ttcatgttca ttactttctt caaaaaaaact 120

ENTERED

Input Set : N:\EBONY'S\ES.txt
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64	ttcttcaaga tctgttcttt taaaataatta tggcggaga aacatcgatgc gagacgcctg	180
65	aaggtcacccg tctctgcgtt aacaactcgcg gtttctcg aagctcagcg acaatgaatc	240
W--> 66	tatgttcaaa ctgttacggc gatctctgtc tcnaacaaca acaaacaagct tccatgaard	300
67	caaccgtcgatcatatctc tctccggta tcgcacctgt tctcgaaaac tacgcggcgg	360
68	agttagaga	369
70	<210> SEQ ID NO: 4	
71	<211> LENGTH: 430	
72	<212> TYPE: DNA	
73	<213> ORGANISM: Arabidopsis thaliana	
75	<400> SEQUENCE: 4	
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77	ctcctgttgtt cttcttcact gctctagctc tcgccttcgc catttaccaat gtcatctcag	120
78	gctggtttgc ctcggcgttc gatgtatgtt accgacatca gagagctaga tccttggctc	180
79	aagaggagga gccaccgatt cctcagccctg ttcaagtcgg tgatgtacg gaggaggagc	240
80	ttaaacatcgatgtt cgtatggctct gatcctcaaa agcccccatt tatggctatc aaacatcaga	300
81	tctatgtatgt tacacaaaggc aggtatgtt acggaccagg aggaccatat gcttttttg	360
82	cagggaaaaga cgctagccga gctcttgcaa agatgtcatt tgaggagaaa gacttgactt	420
83	ggggatgtctc	430
85	<210> SEQ ID NO: 5	
86	<211> LENGTH: 106	
87	<212> TYPE: DNA	
88	<213> ORGANISM: Arabidopsis thaliana	
90	<400> SEQUENCE: 5	
91	cggttatcgat aagcttgata tcgaattcgc ggccgcgcac taattatca tgctacatac	60
92	atagtcaag ttcgtatcaa gttagacttag aaatagttac cgtag	106
94	<210> SEQ ID NO: 6	
95	<211> LENGTH: 271	
96	<212> TYPE: DNA	
97	<213> ORGANISM: Arabidopsis thaliana	
99	<400> SEQUENCE: 6	
100	agacttgacg ttgcaaatgc cgtaatcct ctcccaaagg aggaagacaa gaaacttgg	60
101	atagtgaaga cgcccaatgc agtaaatccg ctctgtatggg attattctcc acttctcacc	120
102	attgataacct gggagcacgc ttactatctg gatTTTgaga accgaagagc tgaatacata	180
103	aatacattca tggaaaagct tggatgtt gaaactgtaa gcacaagggtt ggaatccgca	240
104	attgctcgag cagtgcggaa agaacaagaa g	271
106	<210> SEQ ID NO: 7	
107	<211> LENGTH: 322	
108	<212> TYPE: DNA	
109	<213> ORGANISM: Arabidopsis thaliana	
111	<220> FEATURE:	
112	<221> NAME/KEY: misc_feature	
113	<222> LOCATION: (1)...(322)	
114	<223> OTHER INFORMATION: n = A,T,C or G	
116	<400> SEQUENCE: 7	
117	ttttttttaaa ccaaataatggat aggtatatttatttcaatc agaaggacat taggaaacac	60
118	aagaacagag acaattcaac acatgttaat gcataaaaatc aaacacaactg aaacacaag	120
W--> 119	acacttcaaa cgaaaagaact gagattgaag gaaccaatca tgTTTgnngn agcagaactc	180
W--> 120	atatcttagct caagctgaag cttctgnngc tcaagctgtt gcctcaaaac tggatcttcc	240
121	acttgctctg ttattgcggc tacttggttcc gtctgctcag tctccaaacc ctgaacagga	300

Input Set : N:\EBONY'S\ES.txt
Output Set: N:\CRF3\08162001\I924035.raw

122 acagattcag cagtcgggt ct 322
124 <210> SEQ ID NO: 8
125 <211> LENGTH: 497
126 <212> TYPE: DNA
127 <213> ORGANISM: Arabidopsis thaliana
129 <400> SEQUENCE: 8
130 tttttttttt ttttttaat cataaaaatg aaagcctctt ccataggcag aaacttacac 60
131 aaacatttga gaattcacta cttagacatt gtctcttgc actaccgagt taaaaagatt 120
132 tacattactc tcctcactcc atcaacttct ttgaatttgc ccatctctaa ccaccatacg 180
133 gtaagccgag cctaaaggaa gtgtcggagc tctcggagtc aacaggcgtc ccgttagagt 240
134 ttccggcggtt agtaatagac tccgacgact gtccttcctc gtacacagca gcgttctccg 300
135 attcagcacc accgtgtca tgcacattgt tacatatttgc catgccaagt cgctcggtct 360
136 cttccgttag ttgcgttccc tgcaaaaatc aagacaaaac atatcattaa gttctctagc 420
137 taagtatttg cattttgtgt ttttagtggc accatgtgtt ttgaatttct ctagagatca 480
138 actaactacg aatgagc 497
140 <210> SEQ ID NO: 9
141 <211> LENGTH: 347
142 <212> TYPE: DNA
143 <213> ORGANISM: Arabidopsis thaliana
145 <400> SEQUENCE: 9
146 ttcatttacg taaacacgac agagtcaata cttgtgacga tgagcatcaa tatttactac 60
147 tggcaaagta acttaaacaa aaacaaaaac acgggttaagg gtctaaggga aactacttaa 120
148 accagaaga aaaccgatca ctatcttcat ttcatggaa tcaacataag attcgaat 180
149 gcggttgtat ttggccgggt taccagacca ggtagacttg ttgatgatcg cttaatctt 240
150 agccagttact cgttatacac ttttttcctc gacatcttct cgaagaatct actccaaacct 300
151 tccataactc gggcagcct aacacttttgc ggtcttccta taaggta 347
153 <210> SEQ ID NO: 10
154 <211> LENGTH: 216
155 <212> TYPE: DNA
156 <213> ORGANISM: Arabidopsis thaliana
158 <400> SEQUENCE: 10
159 tttttttttt tttttccaga aaaaaggaca agccaataaa acatagattt tctacacaca 60
160 cacttctt aaaaatacaa actttgagga aacggagagaa actttgaaag ccatacatac 120
161 aatacaagag tgttttgatg gagggaggtc taaaaagtcg agattggagg aaggattcgg 180
162 gtatcctta tactcaaattt gtttcttgc aaagcc 216
164 <210> SEQ ID NO: 11
165 <211> LENGTH: 329
166 <212> TYPE: DNA
167 <213> ORGANISM: Arabidopsis thaliana
169 <400> SEQUENCE: 11
170 tttttttttt tttttttttt ttttttttgc gaggagaaga gctgaatttt tctaattaaat 60
171 aaataaaaattt tggagcccat aatttacatt gctatatctc tctatagctc ctggcttcga 120
172 agtaatttta tcacgtcca cacaaaaaaaaa acctatttcg agtatacaaa ctactaatta 180
173 aatcggaacc actgtgccca cttttctttt ctatcagaga aactaaatca gccagtgcgtt 240
174 cgcttgcatttacatctt gcaatgttagc agacaaggcc aagattctga accgatattt 300
175 aagagagagt caacaacatc atacaagt 329
177 <210> SEQ ID NO: 12
178 <211> LENGTH: 145
179 <212> TYPE: DNA

Input Set : N:\EBONY'S\ES.txt
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180 <213> ORGANISM: Arabidopsis thaliana
182 <400> SEQUENCE: 12
183 tttttttaaa caaacagtct acacatagac aactcaaagc caacaaatga aacaaaatat 60
184 aaaacatatg caaagataaa atatttaaaa aaaggtaaca cgttgattat acatgagtat 120
185 acgtatatact atatatatac gtatt 145
187 <210> SEQ ID NO: 13
188 <211> LENGTH: 318
189 <212> TYPE: DNA
190 <213> ORGANISM: Arabidopsis thaliana
192 <400> SEQUENCE: 13
193 tttttttta ttaatgattt ttattttac atgcaaatta tacgactgaa atgttataagg 60
194 aatagagaca tgtttgatc acaaaatcaa cttatgttagg aaaaacaaat agtataagtc 120
195 tatacgccc ctctctgttc aggctcaag cctccctgc cacatttagg acaactcttc 180
196 ataccaaatac cttgacaatc aaaacatttc caccctctcaa acatatttcc gtttcttcta 240
197 ttttacccgt ttcccttgca accgggacat tcaattgctc ctttggctcc acaagtctca 300
198 caacttttga atatcgaa 318
200 <210> SEQ ID NO: 14
201 <211> LENGTH: 278
202 <212> TYPE: DNA
203 <213> ORGANISM: Arabidopsis thaliana
205 <400> SEQUENCE: 14
206 ataacaaaaac tgtatataaa tataagattt ttttttaatg ttttgactgg caacacgagc 60
207 caggctcaaa atcaatggga caaaaaaaaat atcaaagaaa cagcggattt tgacagtgtt 120
208 gtttagcaact tttgcatcac ccaaaggatct tatttcaaag ttttctcctt tttctcttat 180
209 cagtcgtaga agtcatttaa aaaggaagag ttttaattt atgggttcct ttccgatggc 240
210 tttctggaca agcccgctt gcttttgac atggaaag 278
212 <210> SEQ ID NO: 15
213 <211> LENGTH: 276
214 <212> TYPE: DNA
215 <213> ORGANISM: Arabidopsis thaliana
217 <400> SEQUENCE: 15
218 tttttttta gttaaaaattt tattgattgc gctagtcatt ttatgtttaa attcctaaaa 60
219 cctaaagataa gccataaaaa aacatctcgaa aatatgacat caaaaatata acatttaattt 120
220 ccaaataatca gttctacaat atgggcaata aacattgggtg tctagccaag gcaataagca 180
221 tatggagtga aacctatggg cacatggtag gtgtaccaag gtctcacccct tcttgaaccg 240
222 gtcttagacat atagcacaat ttgttgttc cctaaac 276
224 <210> SEQ ID NO: 16
225 <211> LENGTH: 566
226 <212> TYPE: DNA
227 <213> ORGANISM: Arabidopsis thaliana
229 <220> FEATURE:
230 <221> NAME/KEY: misc_feature
231 <222> LOCATION: (1)...(566)
232 <223> OTHER INFORMATION: n = A,T,C or G
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235 ctttttttttttttaaa ttagatttttgc gaaatttat tctccataca gacaatcaat 60
236 tatttgcataatc ttgtttttttt tttttttttt tttttttttt tttttttttt tttttttttt 120
237 atttttttcc caaacactaa ttgcacaaaa agcaaagtaa aaccactgtg atacaatcc 180
238 tataaaagata aaaaaagttt atgctcaattt aaataacgtt aagaaaaacta tattgacaaa 240

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239	taaagacaac aacgacgaa ataaacaact aaaaaccact ttcttgatt tcacacaatt	300
240	ttagtgatc aaaacgtgt gctgaagtag ctactcacca catttcaca cagaatttgg	360
241	agaaccttag cattacttgg cttcacacat cttggcatct taaactgtcc agccgatgaa	420
242	ccaagccga gaaaatgttc ttgaatcttc cggaaaggtc ctttgcgac aactctcagc	480
W--> 243	tccaaggctc caatagtctt gcatttccgg nnnctaacgt aaccgcac t gatgaatgtc	540
244	cggtctaac agttgcagca atcttg	566
246	<210> SEQ ID NO: 17	
247	<211> LENGTH: 328	
248	<212> TYPE: DNA	
249	<213> ORGANISM: Arabidopsis thaliana	
251	<400> SEQUENCE: 17	
252	ttttttttt tttgtttcta ttttttgctt tcctaattcgt catctgaagt ttccggatcg	60
253	ggtaatttgt ttaaatcaac ccgttcaacg atccattaca cctcttaaac cttctttac	120
254	tactacactc cataagatca tcattaatac gataatcact atgattatct acgtaatcat	180
255	gattaccacg ttgatgttga tgatgatgat gatgacgatt ccctcccgcc cccgcccgtt	240
256	ctaacgcac cacttgcgt ccaacctccg ccgttttct ccttatatac gccgcccaca	300
257	tatctccacc accgttcaact cctcctcc	328
259	<210> SEQ ID NO: 18	
260	<211> LENGTH: 315	
261	<212> TYPE: DNA	
262	<213> ORGANISM: Arabidopsis thaliana	
264	<220> FEATURE:	
265	<221> NAME/KEY: misc_feature	
266	<222> LOCATION: (1)...(315)	
267	<223> OTHER INFORMATION: n = A,T,C or G	
269	<400> SEQUENCE: 18	
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271	tataccaacg tctccattta gctcgaaacg cagcgtctca tagaaggta ctaatgtcgc	120
272	tttgcagca gaataaagac tcatccgtgg tagaggcaac cagtttcaa ccgatgcatt	180
273	cacgactatt cgccatttcg tctggtaag gtatggcaac gctacgtatg tcggataaac	240
274	attccccccag aagtttatgt ccagcaaattg tggaaacaca gtcgtgtcac tcacttcctc	300
275	aaagtaaaaaa gtgtg	315
277	<210> SEQ ID NO: 19	
278	<211> LENGTH: 292	
279	<212> TYPE: DNA	
280	<213> ORGANISM: Arabidopsis thaliana	
282	<400> SEQUENCE: 19	
283	ttttttttt tttttttttt tttaaatggg tcaagacaac taaaacttga tgaatccaaa	60
284	aagaaaaaga acaatggaaa tttggggct aagtactt tttttttgtt ttctcagaac	120
285	agatgaaaca atcttaaagg gttgtttcgt tcatcttcta gacttctttt ttgaggcctt	180
286	agaggaaggc gcaggtgcat tccctttaga actggccact tggtttgact ttgaagttga	240
287	aggagctgct tcttggttat cttggtcac cgccacctgc gagccacggta tt	292
289	<210> SEQ ID NO: 20	
290	<211> LENGTH: 137	
291	<212> TYPE: DNA	
292	<213> ORGANISM: Arabidopsis thaliana	
294	<400> SEQUENCE: 20	
295	ttttttttt tttttttttt tttaataca gagaagggt tattgttttta caagtttaca	60
296	acatctacaa agatttcact acatcctgaa accaaaccct tcgtcctaattt tcacaaaacc	120

→ Use of n and/or Xaa has been detected in the Sequence Listing.
Review the Sequence Listing to insure a corresponding
explanation is presented in the <220> to <223> fields of
each sequence using n or Xaa.

Input Set : N:\EBONY'S\ES.txt
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L:11 M:282 W: Numeric Field Identifier Missing, <140> CURRENT APPLICATION NUMBER: is Added.
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:36 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:66 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:119 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:120 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:270 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:394 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27
L:411 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
L:462 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31
L:606 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41
L:633 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:634 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
L:745 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50
L:775 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52
L:776 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52
L:791 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:53
L:830 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55
L:871 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:58
L:872 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:58
L:966 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:65
L:1009 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:68
L:1034 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:70
L:1192 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82
L:1258 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88
L:1398 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:98
L:1434 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:101
L:1452 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:102
L:1476 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:103
L:1494 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:104
L:1560 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:108
L:1561 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:108
L:1620 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:112
L:1660 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:115
L:1677 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:116
L:1698 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:117
L:1714 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:118
L:1732 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:119
L:1739 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:119
L:1765 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:121
L:1767 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:121
L:1784 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:122
L:1785 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:122
L:1787 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:122
L:1844 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:127
L:1879 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:129
L:1925 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:132

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/924,035

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L:1994 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:137

L:2097 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:145

L:2112 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:146

L:2191 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:152